

SEQUENCE LISTING

<110> Gaiger, Alexander
 McNeill, Patricia D.
 Smithgall, Molly
 Moulton, Gus
 Vedvick, Thomas S.
 Sleath, Paul R.
 Mossman, Sally
 Evans, Lawrence
 Spies, A. Gregory
 Boydston, Jeremy

<120> COMPOSITIONS AND METHODS FOR WT1
 SPECIFIC IMMUNOTHERAPY

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<141> 2001-08-24

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<211> 9

<212> PRT

<213> Mus musculus

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<213> Mus musculus
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<400> 281

<211> 9

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<400> 283

$\langle 211 \rangle$ 9

<213> Mus musculus

<400> 284

<211> 9

<213> Mus musculus

<400> 285

<211> 9

<213> Mus musculus

<400> 286
Asn Gln Met Asn Leu Gly Ala Thr Leu
1 5

<210> 287
<211> 9
<212> PRT
<213> Mus musculus

<400> 287
Pro Gly Ala Ser Ala Tyr Gly Ser Leu
1 5

<210> 288
<211> 9
<212> PRT
<213> Mus musculus

<400> 288
Gln Ala Ser Ser Gly Gln Ala Arg Met
1 5

<210> 289
<211> 9
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<213> Mus musculus

<400> 289
Gln Met Thr Ser Gln Leu Glu Cys Met
1 5

<210> 290
<211> 9
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<400> 290
Gln Gln Tyr Ser Val Pro Pro Pro Val
1 5

<210> 291
<211> 9
<212> PRT
<213> Mus musculus

<400> 291
Gln Tyr Arg Ile His Thr His Gly Val
1 5

<210> 292
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<213> Mus musculus

241250:7355650

<400> 292

<211> 9

<213> Mus musculus

<400> 293

<211> 9

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<400> 294

<211> 9

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<211> 9

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<400> 296

<211> 9

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<400> 297

<211> 9

<213> Mus musculus

<210> 304
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<400> 304
Val Leu Asp Phe Ala Pro Pro Gly Ala
1 5

<210> 305
<211> 9
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<213> Mus musculus

<400> 305
Trp Asn Gln Met Asn Leu Gly Ala Thr
1 5

<210> 306
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<212> PRT
<213> Mus musculus

<400> 306
Tyr Phe Lys Leu Ser His Leu Gln Met
1 5

<210> 307
<211> 9
<212> PRT
<213> Mus musculus

<400> 307
Tyr Gln Met Thr Ser Gln Leu Glu Cys
1 5

<210> 308
<211> 9
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<213> Mus musculus

<400> 308
Tyr Ser Ser Asp Asn Leu Tyr Gln Met
1 5

<210> 309
<211> 6
<212> PRT
<213> Homo sapien

<400> 309
Gly Ala Ala Gln Trp Ala
1 5

<210> 310
<211> 12
<212> PRT
<213> Homo sapien

Trp Asn Gln Met Asn Leu Gly Ala Thr

Arg Tyr Phe Lys
1

<400> 316
Glu Arg Arg Phe Ser Arg Ser Asp Gln Leu Lys Arg His Gln
1 5 10

<400> 317
 Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr His Thr Arg Thr
 1 5 10 15
 His Thr Gly Lys Thr Ser
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      <400> 318
Cys  Gln  Lys  Lys  Phe  Ala  Arg  Ser  Asp  Glu  Leu  Val  Arg  His  His  Asn
  1          5          10          15
Met  His  Gln  Arg  Asn
          20

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<400> 319															
Met	Gly	Ser	Asp	Val	Arg	Asp	Leu	Asn	Ala	Leu	Leu	Pro	Ala	Val	Pro
1				5					10					15	
Ser	Leu	Gly	Gly	Gly	Gly	Gly	Cys	Ala	Leu	Pro	Val	Ser	Gly	Ala	Ala
			20					25					30		
Gln	Trp	Ala	Pro	Val	Leu	Asp	Phe	Ala	Pro	Pro	Gly	Ala	Ser	Ala	Tyr
		35					40					45			
Gly	Ser	Leu	Gly	Gly	Pro	Ala	Pro	Pro	Pro	Ala	Pro	Pro	Pro	Pro	Pro
	50					55					60				
Pro	Pro	Pro	Pro	His	Ser	Phe	Ile	Lys	Gln	Glu	Pro	Ser	Trp	Gly	Gly
65				70						75					80
Ala	Glu	Pro	His	Glu	Gln	Cys	Leu	Ser	Ala	Phe	Thr	Val	His	Phe	
				85					90					95	
Ser	Gly	Gln	Phe	Thr	Gly	Thr	Ala	Gly	Ala	Cys	Arg	Tyr	Gly	Pro	Phe
			100					105					110		
Gly	Pro	Pro	Pro	Pro	Ser	Gln	Ala	Ser	Ser	Gly	Gln	Ala	Arg	Met	Phe
		115					120					125			
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<210> 320
<211> 449
<212> PRT
<213> Mus musculus

<400> 320
Met Gly Ser Asp Val Arg Asp Leu Asn Ala Leu Leu Pro Ala Val Ser
1 5 10 15
Ser Leu Gly Gly Gly Gly Gly Cys Gly Leu Pro Val Ser Gly Ala Ala
20 25 30
Gln Trp Ala Pro Val Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala Tyr
35 40 45

<210> 321

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<211> 9
<212> PRT
<213> Homo sapien and Mus musculus

<400> 321
Pro Ser Gln Ala Ser Ser Gly Gln Ala
1 5

<210> 322
<211> 9
<212> PRT
<213> Homo sapien and Mus musculus

<400> 322
Ser Ser Gly Gln Ala Arg Met Phe Pro
1 5

<210> 323
<211> 9
<212> PRT
<213> Homo sapien and Mus musculus

<400> 323
Gln Ala Arg Met Phe Pro Asn Ala Pro
1 5

<210> 324
<211> 9
<212> PRT
<213> Homo sapien and Mus musculus

<400> 324
Met Phe Pro Asn Ala Pro Tyr Leu Pro
1 5

<210> 325
<211> 9
<212> PRT
<213> Homo sapien and Mus musculus

<400> 325
Pro Asn Ala Pro Tyr Leu Pro Ser Cys
1 5

<210> 326
<211> 9
<212> PRT
<213> Homo sapien and Mus musculus

<400> 326
Ala Pro Tyr Leu Pro Ser Cys Leu Glu
1 5

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<210> 327
 <211> 1029
 <212> DNA
 <213> Homo sapiens

<400> 327
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 tttgacacgg atgtactcaa agcggacggg gcgatcctcg tcgatttctg ggcagagtgg 120
 tgcggtccgt gcaaaatgat cgccccgatt ctggatgaaa tcgctgacga atatcagggc 180
 aaactgaccg ttgcaaaact gaacatcgat caaaaccctg gcactgcgcc gaaatatggc 240
 atccgtggta tcccgaactc gctgctgttc aaaaacgggt aagtggcggc aaccaaagt 300
 ggtgcactgt ctaaaggcca gttgaaagag ttcctcgacg ctaacctggc cggttctggt 360
 tctggccata tgcagcatca ccaccatcac cactgtgtcta tcgaaggctg tgctagctct 420
 ggtggcagcg gtctgggtcc gcgtggtagc tctggttcgg gggacgacga cgacaaatct 480
 agtaggcaca gcacagggtg cgagagcgat aaccacacaa cgcccatcct ctgcggagcc 540
 caatacagaa tacacacgca cggtgtcttc agaggcattc aggatgtgcg acgtgtgcct 600
 ggagtagccc cgactcttgt acggtcggca tctgagacca gtgagaaaacg ccccttcacg 660
 tgtgcttacc caggctgtca taagagatat tttaagctgt cccacttaca gatgcacagc 720
 aggaagcaca ctggtgagaa accataccag tgtgacttca aggactgtga acgaaggttt 780
 tttcgttcag accagctcaa aagacaccaa aggagacata caggtgtgaa accattccag 840
 tgtaaaaact ttctcccgga gtctcccgcc tccgaccacc tgaagaccca caccaggaat 900
 catacaggtg aaaagccctt cagctgtcgg tggccaagtt gtcagaaaaa gtttgcccg 960
 tcagatgaat tagtccgcca tcacaacatg catcagagaa acatgaccaa actccagctg 1020
 gcgctttga 1029

<210> 328
 <211> 1233
 <212> DNA
 <213> Homo sapiens

<400> 328
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 tgcggtccgt gcaaaatgat cgccccgatt ctggatgaaa tcgctgacga atatcagggc 180
 aaactgaccg ttgcaaaact gaacatcgat caaaaccctg gcactgcgcc gaaatatggc 240
 atccgtggta tcccgaactc gctgctgttc aaaaacgggt aagtggcggc aaccaaagt 300
 ggtgcactgt ctaaaggcca gttgaaagag ttcctcgacg ctaacctggc cggttctggt 360
 tctggccata tgcagcatca ccaccatcac cactgtgtcta tcgaaggctg tgctagctct 420
 ggtggcagcg gtctgggtcc gcgtggtagc tctggttcgg gggacgacga cgacaaatct 480
 agtaggggct ccgacgttcg tgacctgaac gcactgctgc cggcagttcc gtccctgggt 540
 ggtggtggtg gttgcgcact gccggttagc ggtgcagcac agtgggctcc ggttctggac 600
 ttgcgaccgc cgggtgcac cgcatacggg tccctgggtg gtccggcacc gccgccggca 660
 ccgcgcgcgc cgcgcgcgcc gccgcgcac tccctcatca aacaggaacc gagctggggt 720
 ggtgcagaac cgcacgaaga acagtgctcg agcgcattca ccgttcaact ctccggccag 780
 ttcaactgga cagccggagc ctgtcgctac gggcccttcg gtccctcctc gccacgccag 840
 gcgtcatccg gccaggccag gatgtttcct aacgcgccct acctgccag ctgcctcgag 900
 agccagcccc ctattcgcaa tcagggttac agcacgggtc ccttcgacgg gacgccacg 960
 tacggtcaca cgcctcgca ccatgcggcg cagttcccca accactcatt caagcatgag 1020
 gatcccatgg gccagcaggg ctgcgtgggt gagcagcagt actcgggtgc gcccccggc 1080
 tatggtgcc acacccccac cgacagctgc accggcagcc aggcctttgct gctgaggacg 1140
 ccctacagca gtgacaattt ataccaaatg acatcccagc ttgaatgcat gacctggaat 1200
 cagatgaact taggagccac cttaaagggc tga 1233

<210> 329

<211> 1776
 <212> DNA
 <213> Homo sapiens

<400> 329

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tgcgggtccgt gcaaaatgat cgccccgatt ctggatgaaa tcgctgacga atatcagggc 180
aaactgaccg ttgcaaaact gaacatcgat caaaaccctg gcaactgcgc gaaatatggc 240
atccgtggta tcccgaactc gctgctgttc aaaaacgggt aagtggcggc aaccaaagtg 300
ggtgcaactg ctaaaggta gttgaaagag ttctcgacg ctaacctggc cggttctggt 360
tctggccata tgcagcatca ccaccatcac cacgtgtcta tcgaaggctg tgctagctct 420
ggtggcagcg gtctggttcc gcgtggtagc tctggttcgg gggacgacga cgacaaatct 480
agttagtggt gctccgactc tcgtgacctg aacgcactgc tgccggcagt tccgtccctg 540
ggtggtggtg gtggttcgac actgccggtt agcgggtgcg cacagtgggc tccggttctg 600
gacttcgcac cgccgggtgc atccgcatac ggttccctgg gtggtccggc accgccgcgc 660
gcaccgcgcg cgccgcgcgc gccgcgcgcg cactccttca tcaaacagga accgagctgg 720
ggtggtgcag aaccgcacga agaacagtgc ctgagcgcat tcaccgttca cttctccgcg 780
cagttcactg gcacagccgg agcctgtcgc tacgggccct tcggtcctcc tccgccacgc 840
caggcgctcat ccggccaggg caggatgttt cctaaccgcg cctacctgcc cagctgcctc 900
gagagccagc ccgctattcg caatcagggt tacagcagcg tcaccttcca cgggacgccc 960
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gtctatggct gccacacccc caccgacagc tgcaccggca gccaggcttt gctgctgagg 1140
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aatcagatga acttaggagc caccttaaag ggccacagca cagggtacga gagcgataac 1260
cacacaacgc ccctcctctg cggagcccaa tacagaatac acacgcacgg tgtcttcaga 1320
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gagaccagtg agaaacgccc ctatcatgtg gcttaccagg gctgcaataa gagatatttt 1440
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gacttcaagg actgtgaacg aggttttttt cgttcagacc agctcaaaaag gcaccaaagg 1560
agacatacag gtgtgaaacc attccagtggt aaaacttgtc agcgaaagtt ctcccggtcc 1620
gaccacctga agacccacac caggactcat acaggtgaaa agcccttcag ctgtcgggtg 1680
ccaagttgtc agaaaaagtt tgcccgggtc gatgaattag tccgccatca caacatgcat 1740
cagagaaaaca tgaccaaact ccagctggcg ctttga 1776

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<210> 330
 <211> 771
 <212> DNA
 <213> Homo sapiens

<400> 330

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atgcagcatc accaccatca ccacggctcc gacgttcgtg acctgaacgc actgctgccg 60
gcagttccgt ccctgggtgg ttggtggtgg tgcgcaactg cggttagcgg tgcagcacag 120
tgggctccgg ttctggaact cgccaccgcg ggtgcatccg catacggttc cctgggtggt 180
ccggcaccgc cgccggcacc gccgcgcgcg ccgccgcgcg cgccgcactc cttcatcaaa 240
caggaaccga gctgggtggg tcgagaaccg cacgaagaac agtgctgag gccattcagg 300
gttcacttct ccggccagtt cactggcaca gccggagcct gtcgctacgg gcccttcggt 360
ctcctccgcg ccagccaggc gtcatccggc caggccagga tgtttcctaa cgcgccctac 420
ctgcccagct gcctcgagag ccagcccgct attcgcaatc agggttacag cacggtcacc 480
ttcgacggga cgccagcta cggtcacacc cctcgcacc atgcggcgca gttccccaac 540
cactcattca agcatgagta tcccatgggc cagcagggtc cgctgggtga gtcacagtac 600
tcggtgccgc ccccggtcta tggtgccac acccccaccg acagctgcac cggcagccag 660
gctttgtctg tgaggacgcc ctacagcagt gacaatttat accaaatgac atcccagctt 720

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gaatgcatga cctggaatca gatgaactta ggagccacct taaagggctg a 771

<210> 331
 <211> 567
 <212> DNA
 <213> Homo sapiens

<400> 331
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 gatgtgcgac gtgtgcctgg agtagcccg actcttgtac ggctcgcatc tgagaccagt 180
 gagaaacgcc ctttcattgt tgcttaccga ggctgcaata agagatattt taagctgtcc 240
 cacttacaga tgcacagcag gaagcacact ggtgagaaac cataccagtg tgacttcaag 300
 gactgtgaac gaagggtttt tcgttcagac cagctcaaaa gacaccaaag gagacataca 360
 ggtgtgaaac cattccagtg taaaacttgt cagcgaaagt tctcccggtc cgaccacctg 420
 aagaccacaca ccaggactca tacaggtgaa aagcccttca gctgtcggtg gccaagttgt 480
 cagaaaaagt ttgcccggtc agatgaatta gtccgccatc acaacatgca tcagagaaac 540
 atgaccaaac tccagctggc gctttga 567

<210> 332
 <211> 342
 <212> PRT
 <213> Homo sapiens

<400> 332
 Met Gln His His His His His Met Ser Asp Lys Ile Ile His Leu
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 Thr Asp Asp Ser Phe Asp Thr Asp Val Leu Lys Ala Asp Gly Ala Ile
 20 25 30
 Leu Val Asp Phe Trp Ala Glu Trp Cys Gly Pro Cys Lys Met Ile Ala
 35 40 45
 Pro Ile Leu Asp Glu Ile Ala Asp Glu Tyr Gln Gly Lys Leu Thr Val
 50 55 60
 Ala Lys Leu Asn Ile Asp Gln Asn Pro Gly Thr Ala Pro Lys Tyr Gly
 65 70 75 80
 Ile Arg Gly Ile Pro Thr Leu Leu Leu Phe Lys Asn Gly Glu Val Ala
 85 90 95
 Ala Thr Lys Val Gly Ala Leu Ser Lys Gly Gln Leu Lys Glu Phe Leu
 100 105 110
 Asp Ala Asn Leu Ala Gly Ser Gly Ser Gly His Met Gln His His His
 115 120 125
 His His His Val Ser Ile Glu Gly Arg Ala Ser Ser Gly Gly Ser Gly
 130 135 140
 Leu Val Pro Arg Gly Ser Ser Gly Ser Gly Asp Asp Asp Lys Ser
 145 150 155 160
 Ser Arg His Ser Thr Gly Tyr Glu Ser Asp Asn His Thr Thr Pro Ile
 165 170 175
 Leu Cys Gly Ala Gln Tyr Arg Ile His Thr His Gly Val Phe Arg Gly
 180 185 190
 Ile Gln Asp Val Arg Arg Val Pro Gly Val Ala Pro Thr Leu Val Arg
 195 200 205

771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800

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<210> 333
<211> 410
<212> PRT
<213> Homo sapiens
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<400>	333																
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				5						10					15		
Thr	Asp	Asp	Ser	Phe	Asp	Thr	Asp	Val	Leu	Lys	Ala	Asp	Gly	Ala	Ile		
			20					25					30				
Leu	Val	Asp	Phe	Trp	Ala	Glu	Trp	Cys	Gly	Pro	Cys	Lys	Met	Ile	Ala		
		35					40					45					
Pro	Ile	Leu	Asp	Glu	Ile	Ala	Asp	Glu	Tyr	Gln	Gly	Lys	Leu	Thr	Val		
	50					55					60						
Ala	Lys	Leu	Asn	Ile	Asp	Gln	Asn	Pro	Gly	Thr	Ala	Pro	Lys	Tyr	Gly		
65					70					75					80		
Ile	Arg	Gly	Ile	Pro	Thr	Leu	Leu	Leu	Phe	Lys	Asn	Gly	Glu	Val	Ala		
				85					90					95			
Ala	Thr	Lys	Val	Gly	Ala	Leu	Ser	Lys	Gly	Gln	Leu	Lys	Glu	Phe	Leu		
			100					105					110				
Asp	Ala	Asn	Leu	Ala	Gly	Ser	Gly	Ser	Gly	His	Met	Gln	His	His	His		
		115					120					125					
His	His	His	Val	Ser	Ile	Glu	Gly	Arg	Ala	Ser	Ser	Gly	Gly	Ser	Gly		
		130				135					140						
Leu	Val	Pro	Arg	Gly	Ser	Ser	Gly	Ser	Gly	Asp	Asp	Asp	Lys	Ser			
145					150					155					160		
Ser	Arg	Gly	Ser	Asp	Val	Arg	Asp	Leu	Asn	Ala	Leu	Leu	Pro	Ala	Val		
				165					170					175			
Pro	Ser	Leu	Gly	Gly	Gly	Gly	Gly	Cys	Ala	Leu	Pro	Val	Ser	Gly	Ala		
			180					185					190				
Ala	Gln	Trp	Ala	Pro	Val	Leu	Asp	Phe	Ala	Pro	Pro	Gly	Ala	Ser	Ala		
		195					200					205					
Tyr	Gly	Ser	Leu	Gly	Gly	Pro	Ala	Pro	Pro	Pro	Ala	Pro	Pro	Pro	Pro		






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<210> 334
<211> 591
<212> PRT
<213> Homo sapiens
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<400>	334														
Met	Gln	His	His	His	His	His	His	Met	Ser	Asp	Lys	Ile	Ile	His	Leu
				5					10					15	
Thr	Asp	Asp	Ser	Phe	Asp	Thr	Asp	Val	Leu	Lys	Ala	Asp	Gly	Ala	Ile
			20					25					30		
Leu	Val	Asp	Phe	Trp	Ala	Glu	Trp	Cys	Gly	Pro	Cys	Lys	Met	Ile	Ala
		35					40					45			
Pro	Ile	Leu	Asp	Glu	Ile	Ala	Asp	Glu	Tyr	Gln	Gly	Lys	Leu	Thr	Val
	50					55					60				
Ala	Lys	Leu	Asn	Ile	Asp	Gln	Asn	Pro	Gly	Thr	Ala	Pro	Lys	Tyr	Gly
	65				70					75					80
Ile	Arg	Gly	Ile	Pro	Thr	Leu	Leu	Leu	Phe	Lys	Asn	Gly	Glu	Val	Ala
			85						90					95	
Ala	Thr	Lys	Val	Gly	Ala	Leu	Ser	Lys	Gly	Gln	Leu	Lys	Glu	Phe	Leu
			100					105					110		
Asp	Ala	Asn	Leu	Ala	Gly	Ser	Gly	Ser	Gly	His	Met	Gln	His	His	His
		115					120					125			
His	His	His	Val	Ser	Ile	Glu	Gly	Arg	Ala	Ser	Ser	Gly	Gly	Ser	Gly
	130					135					140				
Leu	Val	Pro	Arg	Gly	Ser	Ser	Gly	Ser	Gly	Asp	Asp	Asp	Lys	Ser	
145					150					155				160	
Ser	Arg	Met	Gly	Ser	Asp	Val	Arg	Asp	Leu	Asn	Ala	Leu	Leu	Pro	Ala

165 170 175

Val	Pro	Ser	Leu	Gly	Gly	Gly	Gly	Gly	Cys	Ala	Leu	Pro	Val	Ser	Gly
			180					185					190		
Ala	Ala	Gln	Trp	Ala	Pro	Val	Leu	Asp	Phe	Ala	Pro	Pro	Gly	Ala	Ser
		195					200					205			
Ala	Tyr	Gly	Ser	Leu	Gly	Gly	Pro	Ala	Pro	Pro	Pro	Ala	Pro	Pro	Pro
	210				215						220				
Pro	Pro	Pro	Pro	Pro	Pro	His	Ser	Phe	Ile	Lys	Gln	Glu	Pro	Ser	Trp
	225				230					235					240
Gly	Gly	Ala	Glu	Pro	His	Glu	Glu	Gln	Cys	Leu	Ser	Ala	Phe	Thr	Val
			245						250					255	
His	Phe	Ser	Gly	Gln	Phe	Thr	Gly	Thr	Ala	Gly	Ala	Cys	Arg	Tyr	Gly
			260					265					270		
Pro	Phe	Gly	Pro	Pro	Pro	Pro	Ser	Gln	Ala	Ser	Ser	Gly	Gln	Ala	Arg
		275					280					285			
Met	Phe	Pro	Asn	Ala	Pro	Tyr	Leu	Pro	Ser	Cys	Leu	Glu	Ser	Gln	Pro
	290					295					300				
Ala	Ile	Arg	Asn	Gln	Gly	Tyr	Ser	Thr	Val	Thr	Phe	Asp	Gly	Thr	Pro
	305				310					315					320
Ser	Tyr	Gly	His	Thr	Pro	Ser	His	His	Ala	Ala	Gln	Phe	Pro	Asn	His
			325						330					335	
Ser	Phe	Lys	His	Glu	Asp	Pro	Met	Gly	Gln	Gln	Gly	Ser	Leu	Gly	Glu
			340					345					350		
Gln	Gln	Tyr	Ser	Val	Pro	Pro	Pro	Val	Tyr	Gly	Cys	His	Thr	Pro	Thr
		355					360					365			
Asp	Ser	Cys	Thr	Gly	Ser	Gln	Ala	Leu	Leu	Leu	Arg	Thr	Pro	Tyr	Ser
	370					375					380				
Ser	Asp	Asn	Leu	Tyr	Gln	Met	Thr	Ser	Gln	Leu	Glu	Cys	Met	Thr	Trp
	385				390					395				400	
Asn	Gln	Met	Asn	Leu	Gly	Ala	Thr	Leu	Lys	Gly	His	Ser	Thr	Gly	Tyr
			405					410						415	
Glu	Ser	Asp	Asn	His	Thr	Thr	Pro	Ile	Leu	Cys	Gly	Ala	Gln	Tyr	Arg
		420					425					430			
Ile	His	Thr	His	Gly	Val	Phe	Arg	Gly	Ile	Gln	Asp	Val	Arg	Arg	Val
		435					440					445			
Pro	Gly	Val	Ala	Pro	Thr	Leu	Val	Arg	Ser	Ala	Ser	Glu	Thr	Ser	Glu
	450					455					460				
Lys	Arg	Pro	Phe	Met	Cys	Ala	Tyr	Pro	Gly	Cys	Asn	Lys	Arg	Tyr	Phe
	465				470					475				480	
Lys	Leu	Ser	His	Leu	Gln	Met	His	Ser	Arg	Lys	His	Thr	Gly	Glu	Lys
			485						490				495		
Pro	Tyr	Gln	Cys	Asp	Phe	Lys	Asp	Cys	Glu	Arg	Arg	Phe	Phe	Arg	Ser
		500						505					510		
Asp	Gln	Leu	Lys	Arg	His	Gln	Arg	Arg	His	Thr	Gly	Val	Lys	Pro	Phe
		515					520					525			
Gln	Cys	Lys	Thr	Cys	Gln	Arg	Lys	Phe	Ser	Arg	Ser	Asp	His	Leu	Lys
	530					535					540				
Thr	His	Thr	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Phe	Ser	Cys	Arg	Trp
	545				550					555				560	
Pro	Ser	Cys	Gln	Lys	Lys	Phe	Ala	Arg	Ser	Asp	Glu	Leu	Val	Arg	His
			565					570						575	
His	Asn	Met	His	Gln	Arg	Asn	Met	Thr	Lys	Leu	Gln	Leu	Ala	Leu	
			580					585						590	



<400> 336

Met	Gln	His	His	His	His	His	His	His	Ser	Thr	Gly	Tyr	Glu	Ser	Asp
				5					10					15	
Asn	His	Thr	Thr	Pro	Ile	Leu	Cys	Gly	Ala	Gln	Tyr	Arg	Ile	His	Thr
			20					25					30		
His	Gly	Val	Phe	Arg	Gly	Ile	Gln	Asp	Val	Arg	Arg	Val	Pro	Gly	Val
		35					40					45			

[illegible]

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400> 337
atgcagcattc accaccatca ccacgggttc gacgtgcggg acctgaacgc actgctgcgc 60
cgagttccat ccttgggttg cgttggaagg tgcgcactgc cggtttagcg tgcagcacag 120
tgggtctccag ttctggactt cgacccgcct ggtgcattcg catacgggtt cctgggttgt 180
ccagcacctc cgcccgaac gcccccacgc ctccacgcg ccccgcactc cttcatcaaa 240
caggaacctc gctgggtgtg tgcgaaccg cacgaagaac agtgctctgag cgcattctga 300
gaattctgca gatattcat acac                                     324

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<400> 338						
atgcagcatc	accaccatca	ccaccacgaa	gaacagtgcc	tgagcgcatt	caccgttcac	60
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cgcgccagcc	aggcgtcatc	cgcgcaggcc	agatgttttc	ctaacgcgcc	ctacctgccc	180
agctgcctcg	agagccagcc	cgctattcgc	aatcagggtt	acagcacggt	caccttcgac	240
gggacgccca	gctacggtea	cacgccctcg	caccatgcgg	cgcagttccc	caaccaactca	300
tccaagatc	aggatcccat	gggccacgac	ggctcgtctg	gtgacgagca	gtactcggtg	360
cgcgcgcccg	tctatggctg	ccacaccccc	accgacagct	gcaccggcag	ccaggctttg	420
ctgctgagga	cgcctcacag	cagtacaaat	ttatactgat	ga		462

<400> 339
atgcagcatc accaccatca ccaccaggct ttgctgctga ggacgcccta cagcagtgac 60

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aatttataacc aaatgacatc ccagcttgaa tgcattgacct ggaatcagat gaacttagga 120
gccaccttaa agggccacag cacagggtag gagagcgata accacacaac gcccatcctc 180
tgcggagccc aatacagaat acacacgcac ggtgtcttca gaggcattca ggtgtgcga 240
cgtgtgcctg gagtagcccc gactcttgta cggtcggcat ctgagaccag tgagaaacgc 300
cccttcatgt gtgcttacct aggctgcaat aagagatatt ttaagctgtc ccacttacag 360
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<210> 340
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<212> DNA
<213> Homo sapiens

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aggagacata caggtgtgaa accattccag tgtaaaactt gtcagcgaag gttctcccg 180
tccgaccacc tgaagacca caccaggact catacagggtg aaaagccctt cagctgtcgg 240
tggccaagtt gtcagaaaaa gtttgcccg tcatagtaat tagtccgcca tcacaacatg 300
catcagagaa acatgaccaa actccagctg gcgctttga 339

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<210> 341
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actggcacag ccggagcctg tcgctacggg cccttcggtc ctctcccgcc cagccaggcg 180
tcatccggcc aggccaggat gtttcctaac gcgccctacc tgcccagctg cctcgagagc 240
cagcccgcta ttcgcaatca gggttacagc acggtcacct tcgacgggac gccagctac 300
ggtcacacgc cctcgcacca tgcggcgagc ttccccaacc actcattcaa gcatgaggat 360
cccatgggccc agcagggctc gctgggtgag cagcagtact cggtgccgcc cccggtctat 420
ggctgccaca cccccaccga cagctgcacc ggcagccagg ctttgctgct gaggacgccc 480
tacagcagtg acaatttata ccaaatagaca tcccagcttg aatgcatgac ctggaatcag 540
atgaacttag gagccacctt aaagggccac agcacagggt acgagagcga taaccacaca 600
acgcccattc tctgcggagc ccaatacaga atacacacgc acggtgtctt cagaggcatt 660
caggatgtgc gacgtgtgcc tggagtagcc ccgactcttg tacggtcggc atctgagacc 720
agtgagaaac gcccttcat gtgtgcttac ccaggctgca ataagagata ttttaagctg 780
tcccacttac agatgcacag caggaagcac actggtgaga aaccatacca gtgtgacttc 840
aaggactgtg aacgaagggt ttttcgttca gaccagctca aaagacacca aaggagacat 900
acagggtgtg aaccattcca gtgtaaaaact tgtcagcgaa agttctcccg gtcggaccac 960
ctgaagagcc accaccaggc tcatacagggt gaaaagccct tcagctgtcg gtggccaagt 1020
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aacatgacca aactccagct ggcgctttga 1110

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<210> 342
<211> 99
<212> PRT
<213> Homo sapiens

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CCDS10332.1: Homo sapiens

<400> 342

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Met Gln His His His His His His Gly Ser Asp Val Arg Asp Leu Asn
                    5                      10                      15
Ala Leu Leu Pro Ala Val Pro Ser Leu Gly Gly Gly Gly Gly Cys Ala
                20                25                30
Leu Pro Val Ser Gly Ala Ala Gln Trp Ala Pro Val Leu Asp Phe Ala
                35                40                45
Pro Pro Gly Ala Ser Ala Tyr Gly Ser Leu Gly Gly Pro Ala Pro Pro
                50                55                60
Pro Ala Pro Pro Pro Pro Pro Pro Pro Pro Pro His Ser Phe Ile Lys
                65                70                75                80
Gln Glu Pro Ser Trp Gly Gly Ala Glu Pro His Glu Glu Gln Cys Leu
                85                90                95
Ser Ala Phe

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<210> 343

<211> 152

<212> PRT

<213> Homo sapiens

<400> 343

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Met Gln His His His His His His His Glu Glu Gln Cys Leu Ser Ala
                    5                      10                      15
Phe Thr Val His Phe Ser Gly Gln Phe Thr Gly Thr Ala Gly Ala Cys
                20                25                30
Arg Tyr Gly Pro Phe Gly Pro Pro Pro Pro Ser Gln Ala Ser Ser Gly
                35                40                45
Gln Ala Arg Met Phe Pro Asn Ala Pro Tyr Leu Pro Ser Cys Leu Glu
                50                55                60
Ser Gln Pro Ala Ile Arg Asn Gln Gly Tyr Ser Thr Val Thr Phe Asp
                65                70                75                80
Gly Thr Pro Ser Tyr Gly His Thr Pro Ser His His Ala Ala Gln Phe
                85                90                95
Pro Asn His Ser Phe Lys His Glu Asp Pro Met Gly Gln Gln Gly Ser
                100                105                110
Leu Gly Glu Gln Gln Tyr Ser Val Pro Pro Pro Val Tyr Gly Cys His
                115                120                125
Thr Pro Thr Asp Ser Cys Thr Gly Ser Gln Ala Leu Leu Leu Arg Thr
                130                135                140
Pro Tyr Ser Ser Asp Asn Leu Tyr
145                150

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<210> 344

<211> 133

<212> PRT

<213> Homo sapiens

<400> 344

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Met Gln His His His His His His Gln Ala Leu Leu Leu Arg Thr Pro
                    5                      10                      15
Tyr Ser Ser Asp Asn Leu Tyr Gln Met Thr Ser Gln Leu Glu Cys Met
                20                25                30

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Ser	Trp	Gly	Gly	Ala	Glu	Pro	His	Glu	Glu	Gln	Cys	Leu	Ser	Ala	Phe	
			20					25					30			
Thr	Val	His	Phe	Ser	Gly	Gln	Phe	Thr	Gly	Thr	Ala	Gly	Ala	Cys	Arg	
		35					40					45				
Tyr	Gly	Pro	Phe	Gly	Pro	Pro	Pro	Pro	Ser	Gln	Ala	Ser	Ser	Gly	Gln	
	50					55					60					
Ala	Arg	Met	Phe	Pro	Asn	Ala	Pro	Tyr	Leu	Pro	Ser	Cys	Leu	Glu	Ser	
65					70					75					80	

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<212> DNA
<213> Artificial Sequence
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ggctccgacg tgcgggacct g

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<220>
<223> Primer

<400> 348
gaattctcaa agcgccagct ggagtttggt

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<220>
<223> Primer

<400> 349
ggctccgacg tgcgggacct g

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<210> 350
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gaattctcaa agcgccagct ggagtttggt

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cacagcacag ggtacgagag c

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<400> 352
gaattctcaa agcgccagct ggagtttggt

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<210> 353
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<211> 30

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 ggatatctgc agaattctca aagcgccagc 30

 <210> 359
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 <220>
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 <400> 359
 cactccttca tcaaacagga ac 22

 <210> 360
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 ggatatctgc agaattctca aagcgccagc 30

 <210> 361
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 <212> DNA
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 <400> 361
 ggttccgacg tgcgggacct gaacgcactg ctg 33

 <210> 362
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 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Primer

 <400> 362
 ctgccggcag cagtgcgttc aggtcccgca cgtcggaacc 40

 <210> 363

<211> 35
 <212> DNA
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<220>
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<400> 363
 ccggcagttc catccctggg tggcgggtgga ggctg 35

<210> 364
 <211> 38
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 364
 cggcagtgcg cagcctccac cgccaccag ggatggaa 38

<210> 365
 <211> 35
 <212> DNA
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<400> 365
 cgcactgccg gttagcggcg cagcacagtg ggctc 35

<210> 366
 <211> 33
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 366
 cagaactgga gccactgtg ctgcaccgct aac 33

<210> 367
 <211> 38
 <212> DNA
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<220>
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<400> 367
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<210> 368
 <211> 39
 <212> DNA
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<220>
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<400> 368
 cagggaaccg tatgcggatg caccaggcgg tgcgaagtc 39

<210> 369
 <211> 38
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 369
 ggttcctgg gtggtccagc acctccgcc gcaacgcc 38

<210> 370
 <211> 38
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Primer

<400> 370
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 <213> Artificial Sequence

<220>
 <223> Primer

<400> 371
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<210> 372
 <211> 39
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<220>
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758

<223> n = A,T,C or G

<400> 377

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<210> 378

<211> 1291

<212> DNA

<213> Homo sapiens

<400> 378

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1291

<210> 379
<211> 1281
<212> DNA
<213> Homo sapiens

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<211> 3020
<212> DNA
<213> Homo sapiens

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<210> 381

<211> 1291

<212> DNA

<213> Homo sapiens

<400> 381

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<210> 382
<211> 1491
<212> DNA
<213> Homo sapiens

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<400> 382
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<210> 383
<211> 1251
<212> DNA
<213> Homo sapiens

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<400> 383
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<210> 384
<211> 228
<212> DNA
<213> Homo sapiens

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<400> 384
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cagagggtga tctttgcccg aaaacagctg gaagatggtc gtaccctgtc tgactacaac 180
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<210> 385
<211> 1515
<212> DNA
<213> Homo sapiens

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aatcagggtt acagcacggt cacttcgac gggacgcccc gctacggtca cagccctcg 720
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```

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<210> 386
<211> 648
<212> DNA
<213> Homo sapiens

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ctgggtgagc agcagttactc ggtgccgccc ccggtctatg gctgccacac ccccaccgac 420
agctgcaccg gcagccaggc tttgctgctg aggagccctt acagcagtga caatttatac 480
caaatgacat ccagcttga atgcatgacc tgggaatcaga tgaacttagg agccacctta 540
aagggccaca gcacagggtg cgagagcgat aaccacacaa cgccatcctt ctgcggagcc 600
caatacagaa tacacacgca cgggtgtcttc agaggcattc agtgatga 648

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<210> 387
<211> 1089
<212> DNA
<213> Homo sapiens

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<400> 387
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cgctacgggc ccttcgggtcc tcctccgccc agccaggcgt catccggcca ggccaggatg 180
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agctgcaccg cgccctacct tttgctgctg aggagccctt acagcagtga caatttatac 480
caaatgacat ccagcttga atgcatgacc tgggaatcaga tgaacttagg agccacctta 540
aagggccaca gcacagggtg cgagagcgat aaccacacaa cgccatcctt ctgcggagcc 600
caatacagaa tacacacgca cgggtgtcttc agaggcattc aggatgtgcg acgtgtgcct 660
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tgtgcttacc caggctgcaa taagagatat tttaagctgt ccacttaca gatgcacagc 780
aggaaacaca ctggtgagaa accataccag tgtgacttca aggactgtga acgaaggttt 840
tttcgttcag accagctcaa aagacaccaa aggagacata cagggtgtgaa accattccag 900

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tgtaaaactt gtcagcgaaa gttctcccgg tccgaccacc tgaagaccca caccaggact 960
 catacagggtg aaaagccctt cagctgtcgg tggccaagtt gtcagaaaaa gtttgcggcg 1020
 tcagatgaat tagtccgccca tcacaacatg catcagagaa acatgaccaa actccagctg 1080
 gcgctttga 1089

<210> 388
 <211> 1035
 <212> DNA
 <213> Homo sapiens

<400> 388
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 accgccttcc tcggcttggtg tgttgcgac aacaacggca acggcgcacg agtccaaacgc 180
 gtggtcggga gcgctccggc ggcaagtctc ggcatctcca ccggcgacgt gatcaccgcg 240
 gtcgacggcg ctccgatcaa ctccggccacc gcgatggcgg acgcgttaa cgggcatcat 300
 cccggtgacg tcatctcggg gacctggcaa accaagtcgg gcggcacgag tacagggaac 360
 gtgacattgg ccgagggacc cccggccgaa ttccactcct tcatcaaaaca ggaaccgagc 420
 tggggtggtg cagaaccgca cgaagaacag tgctgagcg cattcacctg tcaactctcc 480
 ggccagttca ctggcacagc cggagcctgt cgctacgggc ccttcggtcc tctccgccc 540
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 cccagctacg gtcacacgcc ctgcgacccat gggcgcgagt tccccaaaca ctattcaag 720
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 tggaatcaga tgaacttagg agccacctta aagggccaca gcacagggtg cgagagcgat 960
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 agaggcatte agtga 1035

<210> 389
 <211> 1263
 <212> DNA
 <213> Homo sapiens

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 accgccttcc tcggcttggtg tgttgcgac aacaacggca acggcgcacg agtccaaacgc 180
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 gtcgacggcg ctccgatcaa ctccggccacc gcgatggcgg acgcgttaa cgggcatcat 300
 cccggtgacg tcatctcggg gacctggcaa accaagtcgg gcggcacgag tacagggaac 360
 gtgacattgg ccgagggacc cccggccgaa ttcccgctgg tgccgcgagc cagcccagtg 420
 ggctccgagc ttccgggacct gaacgcactg ctgccggcag ttccgtcctt ggggtggtggt 480
 ggtggttgcg cactgcgggt tagcggtgca gcacagtggt ctccggttct ggacttcgca 540
 ccgcggggtg catccgcata cggttccctg ggtggtccgg caccgcgcgc ggcaccgcg 600
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 ggcacagccg gagcctgtcg ctacgggccc ttccgtcctc ctccgccag ccaggcgtca 780
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 atgggcccagc agggctcgct gggtagcag cagtactcgg tgccgcccc ggtctatggc 1020
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agcagtgaca atttatacca aatgacatcc cagcttgaat gcatgacctg gaatcagatg 1140
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<210> 390
<211> 1707
<212> DNA
<213> Homo sapiens

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gtggtcggga gcgctccggc ggcaagtctc ggcatctcca ccggcgacgt gatcaccgcg 240
gtcgacggcg ctccgatcaa ctcggccacc gcgatggcgg acgcgcttaa cgggcatcat 300
cccggtgacg tcatctcggg gacctggcaa accaagtcgg gcggcacgcg tacagggaac 360
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gaaccgcacg aagaacagtg cctgagcgca ttcaccgttc acttctccgg ccagttcact 720
ggcacagccg gagectgtcg ctacgggcc ttccgtcctc ctccgccag ccaggcgta 780
tccggccagg ccaggatgtt tctaacgcg ccctacctgc ccagctgect cgagagccag 840
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<210> 391
<211> 344
<212> PRT
<213> Homo sapiens

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Phe Ala Ile Pro Ile Gly Gln Ala Met Ala Ile Ala Gly Gln Ile Lys
      20                      25                      30
Leu Pro Thr Val His Ile Gly Pro Thr Ala Phe Leu Gly Leu Gly Val

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35				40				45							
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Ala	Pro	Ala	Ala	Ser	Leu	Gly	Ile	Ser	Thr	Gly	Asp	Val	Ile	Thr	Ala
	65				70					75					80
Val	Asp	Gly	Ala	Pro	Ile	Asn	Ser	Ala	Thr	Ala	Met	Ala	Asp	Ala	Leu
				85					90					95	
Asn	Gly	His	His	Pro	Gly	Asp	Val	Ile	Ser	Val	Thr	Trp	Gln	Thr	Lys
			100					105					110		
Ser	Gly	Gly	Thr	Arg	Thr	Gly	Asn	Val	Thr	Leu	Ala	Glu	Gly	Pro	Pro
		115					120					125			
Ala	Glu	Phe	His	Ser	Phe	Ile	Lys	Gln	Glu	Pro	Ser	Trp	Gly	Gly	Ala
	130					135						140			
Glu	Pro	His	Glu	Glu	Gln	Cys	Leu	Ser	Ala	Phe	Thr	Val	His	Phe	Ser
	145				150					155					160
Gly	Gln	Phe	Thr	Gly	Thr	Ala	Gly	Ala	Cys	Arg	Tyr	Gly	Pro	Phe	Gly
				165					170					175	
Pro	Pro	Pro	Pro	Ser	Gln	Ala	Ser	Ser	Gly	Gln	Ala	Arg	Met	Phe	Pro
				180				185					190		
Asn	Ala	Pro	Tyr	Leu	Pro	Ser	Cys	Leu	Glu	Ser	Gln	Pro	Ala	Ile	Arg
		195					200					205			
Asn	Gln	Gly	Tyr	Ser	Thr	Val	Thr	Phe	Asp	Gly	Thr	Pro	Ser	Tyr	Gly
	210					215					220				
His	Thr	Pro	Ser	His	His	Ala	Ala	Gln	Phe	Pro	Asn	His	Ser	Phe	Lys
	225				230					235					240
His	Glu	Asp	Pro	Met	Gly	Gln	Gln	Gly	Ser	Leu	Gly	Glu	Gln	Gln	Tyr
				245					250					255	
Ser	Val	Pro	Pro	Pro	Val	Tyr	Gly	Cys	His	Thr	Pro	Thr	Asp	Ser	Cys
			260					265					270		
Thr	Gly	Ser	Gln	Ala	Leu	Leu	Leu	Arg	Thr	Pro	Tyr	Ser	Ser	Asp	Asn
		275					280					285			
Leu	Tyr	Gln	Met	Thr	Ser	Gln	Leu	Glu	Cys	Met	Thr	Trp	Asn	Gln	Met
	290					295					300				
Asn	Leu	Gly	Ala	Thr	Leu	Lys	Gly	His	Ser	Thr	Gly	Tyr	Glu	Ser	Asp
	305				310					315					320
Asn	His	Thr	Thr	Pro	Ile	Leu	Cys	Gly	Ala	Gln	Tyr	Arg	Ile	His	Thr

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<212>	PRT																
<213>	Homo sapiens																
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Phe Ala Ile Pro Ile Gly Gln Ala Met Ala Ile Ala Gly Gln Ile Lys			20					25					30				
Leu Pro Thr Val His Ile Gly Pro Thr Ala Phe Leu Gly Leu Gly Val			35				40					45					
Val Asp Asn Asn Gly Asn Gly Ala Arg Val Gln Arg Val Val Gly Ser			50			55					60						
Ala Pro Ala Ala Ser Leu Gly Ile Ser Thr Gly Asp Val Ile Thr Ala			65		70					75							80
Val Asp Gly Ala Pro Ile Asn Ser Ala Thr Ala Met Ala Asp Ala Leu				85					90						95		
Asn Gly His His Pro Gly Asp Val Ile Ser Val Thr Trp Gln Thr Lys			100					105						110			
Ser Gly Gly Thr Arg Thr Gly Asn Val Thr Leu Ala Glu Gly Pro Pro			115				120					125					
Ala Glu Phe Pro Leu Val Pro Arg Gly Ser Pro Met Gly Ser Asp Val			130			135						140					
Arg Asp Leu Asn Ala Leu Leu Pro Ala Val Pro Ser Leu Gly Gly Gly					150						155						160
Gly Gly Cys Ala Leu Pro Val Ser Gly Ala Ala Gln Trp Ala Pro Val				165					170						175		
Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala Tyr Gly Ser Leu Gly Gly			180					185						190			
Pro Ala Pro Pro Pro Ala Pro Pro Pro Pro Pro Pro Pro Pro His			195				200						205				
Ser Phe Ile Lys Gln Glu Pro Ser Trp Gly Gly Ala Glu Pro His Glu			210			215						220					

Glu 225	Gln	Cys	Leu	Ser	Ala 230	Phe	Thr	Val	His	Phe 235	Ser	Gly	Gln	Phe	Thr 240
Gly	Thr	Ala	Gly	Ala 245	Cys	Arg	Tyr	Gly	Pro 250	Phe	Gly	Pro	Pro	Pro	Pro 255
Ser	Gln	Ala	Ser	Ser 260	Gly	Gln	Ala	Arg 265	Met	Phe	Pro	Asn	Ala 270	Pro	Tyr
Leu	Pro	Ser	Cys	Leu	Glu	Ser	Gln 280	Pro	Ala	Ile	Arg	Asn 285	Gln	Gly	Tyr
Ser	Thr	Val	Thr	Phe	Asp	Gly 295	Thr	Pro	Ser	Tyr	Gly 300	His	Thr	Pro	Ser
His 305	His	Ala	Ala	Gln	Phe 310	Pro	Asn	His	Ser	Phe 315	Lys	His	Glu	Asp	Pro 320
Met	Gly	Gln	Gln	Gly 325	Ser	Leu	Gly	Glu	Gln 330	Gln	Tyr	Ser	Val	Pro 335	Pro
Pro	Val	Tyr	Gly 340	Cys	His	Thr	Pro	Thr 345	Asp	Ser	Cys	Thr	Gly 350	Ser	Gln
Ala	Leu	Leu	Leu	Arg	Thr	Pro	Tyr 360	Ser	Ser	Asp	Asn	Leu	Tyr	Gln	Met
Thr 370	Ser	Gln	Leu	Glu	Cys	Met 375	Thr	Trp	Asn	Gln	Met 380	Asn	Leu	Gly	Ala
Thr 385	Leu	Lys	Gly	His	Ser 390	Thr	Gly	Tyr	Glu	Ser 395	Asp	Asn	His	Thr	Thr 400
Pro	Ile	Leu	Cys	Gly 405	Ala	Gln	Tyr	Arg	Ile 410	His	Thr	His	Gly	Val	Phe 415
Arg	Gly	Ile	Gln 420	Asp	Val	Arg	Arg	Val 425	Pro	Gly	Val	Ala	Pro	Thr	Leu
Val	Arg	Ser	Ala	Ser	Glu	Thr	Ser 440	Glu	Lys	Arg	Pro	Phe 445	Met	Cys	Ala
Tyr 450	Pro	Gly	Cys	Asn	Lys	Arg 455	Tyr	Phe	Lys	Leu	Ser 460	His	Leu	Gln	Met
His 465	Ser	Arg	Lys	His	Thr 470	Gly	Glu	Lys	Pro	Tyr 475	Gln	Cys	Asp	Phe	Lys 480
Asp	Cys	Glu	Arg	Arg 485	Phe	Phe	Arg	Ser	Asp 490	Gln	Leu	Lys	Arg	His	Gln
Arg	Arg	His	Thr 500	Gly	Val	Lys	Pro	Phe 505	Gln	Cys	Lys	Thr	Cys 510	Gln	Arg

Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala Tyr Gly Ser Leu Gly Gly
180 185 190

[illegible]

<211> 362

<213> Hom

Met His S

Met His Ser Phe Ile Lys Gln Glu Pro Ser Trp Gly Gly Ala Glu Pro

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Phe	Thr	Gly	Thr	Ala	Gly	Ala	Cys	Arg	Tyr	Gly	Pro	Phe	Gly	Pro	Pro				
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Pro	Pro	Ser	Gln	Ala	Ser	Ser	Gly	Gln	Ala	Arg	Met	Phe	Pro	Asn	Ala				
			50				55				60								
Pro	Tyr	Leu	Pro	Ser	Cys	Leu	Glu	Ser	Gln	Pro	Ala	Ile	Arg	Asn	Gln				
			65				70				75				80				
Gly	Tyr	Ser	Thr	Val	Thr	Phe	Asp	Gly	Thr	Pro	Ser	Tyr	Gly	His	Thr				
			85						90				95						
Pro	Ser	His	His	Ala	Ala	Gln	Phe	Pro	Asn	His	Ser	Phe	Lys	His	Glu				
			100						105				110						
Asp	Pro	Met	Gly	Gln	Gln	Gly	Ser	Leu	Gly	Glu	Gln	Gln	Tyr	Ser	Val				
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Pro	Pro	Pro	Val	Tyr	Gly	Cys	His	Thr	Pro	Thr	Asp	Ser	Cys	Thr	Gly				
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Ser	Gln	Ala	Leu	Leu	Leu	Arg	Thr	Pro	Tyr	Ser	Ser	Asp	Asn	Leu	Tyr				
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Gln	Met	Thr	Ser	Gln	Leu	Glu	Cys	Met	Thr	Trp	Asn	Gln	Met	Asn	Leu				
			165						170				175						
Gly	Ala	Thr	Leu	Lys	Gly	His	Ser	Thr	Gly	Tyr	Glu	Ser	Asp	Asn	His				
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Thr	Thr	Pro	Ile	Leu	Cys	Gly	Ala	Gln	Tyr	Arg	Ile	His	Thr	His	Gly				
			195			200						205							
Val	Phe	Arg	Gly	Ile	Gln	Asp	Val	Arg	Arg	Val	Pro	Gly	Val	Ala	Pro				
			210			215						220							
Thr	Leu	Val	Arg	Ser	Ala	Ser	Glu	Thr	Ser	Glu	Lys	Arg	Pro	Phe	Met				
			225			230						235			240				
Cys	Ala	Tyr	Pro	Gly	Cys	Asn	Lys	Arg	Tyr	Phe	Lys	Leu	Ser	His	Leu				
			245						250						255				
Gln	Met	His	Ser	Arg	Lys	His	Thr	Gly	Glu	Lys	Pro	Tyr	Gln	Cys	Asp				
			260						265						270				
Phe	Lys	Asp	Cys	Glu	Arg	Arg	Phe	Phe	Arg	Ser	Asp	Gln	Leu	Lys	Arg				
			275			280						285							
His	Gln	Arg	Arg	His	Thr	Gly	Val	Lys	Pro	Phe	Gln	Cys	Lys	Thr	Cys				

290					295					300					
Gln 305	Arg	Lys	Phe	Ser	Arg 310	Ser	Asp	His	Leu	Lys 315	Thr	His	Thr	Arg	Thr 320
His	Thr	Gly	Glu	Lys 325	Pro	Phe	Ser	Cys	Arg 330	Trp	Pro	Ser	Cys	Gln 335	Lys
Lys	Phe	Ala	Arg 340	Ser	Asp	Glu	Leu	Val 345	Arg	His	His	Asn	Met 350	His	Gln
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Pro	Pro 50	Ser	Gln	Ala	Ser	Ser 55	Gly	Gln	Ala	Arg	Met 60	Phe	Pro	Asn	Ala
Pro	Tyr 65	Leu	Pro	Ser	Cys 70	Leu	Glu	Ser	Gln	Pro 75	Ala	Ile	Arg	Asn	Gln 80
Gly	Tyr	Ser	Thr	Val 85	Thr	Phe	Asp	Gly	Thr 90	Pro	Ser	Tyr	Gly	His 95	Thr
Pro	Ser	His 100	His	Ala	Ala	Gln	Phe	Pro 105	Asn	His	Ser	Phe	Lys 110	His	Glu
Asp	Pro	Met 115	Gly	Gln	Gln	Gly	Ser 120	Leu	Gly	Glu	Gln	Gln 125	Tyr	Ser	Val
Pro	Pro 130	Pro	Val	Tyr	Gly	Cys 135	His	Thr	Pro	Thr	Asp 140	Ser	Cys	Thr	Gly
Ser 145	Gln	Ala	Leu	Leu	Leu 150	Arg	Thr	Pro	Tyr	Ser 155	Ser	Asp	Asn	Leu	Tyr 160
Gln	Met	Thr	Ser	Gln 165	Leu	Glu	Cys	Met	Thr 170	Trp	Asn	Gln	Met	Asn 175	Leu

Gly Ala Thr Leu Lys Gly His Ser Thr Gly Tyr Glu Ser Asp Asn His
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Val Phe Arg Gly Ile Gln
 210

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<210> 397
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 397
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<210> 398
 <211> 31
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<220>
 <223> PCR primer

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<210> 399
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<220>
 <223> PCR primer

<400> 399
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<210> 400
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<220>
 <223> PCR primer

<400> 400
 cgataagcat atgacggccg cgtccgataa c 31

<210> 401
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 401
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<210> 402
 <211> 30
 <212> DNA
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<220>
 <223> PCR primer

<400> 402
 gacgaaagca tatgcactcc ttcatcaaac 30

<210> 403
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 403
 gtctgcagcg gccgctcaaa gcgccagc 28

<210> 404
 <211> 449
 <212> PRT
 <213> Homo sapiens

<400> 404
 Met Gly Ser Asp Val Arg Asp Leu Asn Ala Leu Leu Pro Ala Val Pro
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CCDS: 103336.1

Ser	Leu	Gly	Gly	Gly	Gly	Gly	Cys	Ala	Leu	Pro	Val	Ser	Gly	Ala	Ala
Gln	Trp	Ala	Pro	Val	Leu	Asp	Phe	Ala	Pro	Pro	Gly	Ala	Ser	Ala	Tyr
Gly	Ser	Leu	Gly	Gly	Pro	Ala	Pro	Pro	Pro	Ala	Pro	Pro	Pro	Pro	Pro
Pro	Pro	Pro	Pro	His	Ser	Phe	Ile	Lys	Gln	Glu	Pro	Ser	Trp	Gly	Gly
Ala	Glu	Pro	His	Glu	Glu	Gln	Cys	Leu	Ser	Ala	Phe	Thr	Val	His	Phe
Ser	Gly	Gln	Phe	Thr	Gly	Thr	Ala	Gly	Ala	Cys	Arg	Tyr	Gly	Pro	Phe
Gly	Pro	Pro	Pro	Pro	Ser	Gln	Ala	Ser	Ser	Gly	Gln	Ala	Arg	Met	Phe
Pro	Asn	Ala	Pro	Tyr	Leu	Pro	Ser	Cys	Leu	Glu	Ser	Gln	Pro	Ala	Ile
Arg	Asn	Gln	Gly	Tyr	Ser	Thr	Val	Thr	Phe	Asp	Gly	Thr	Pro	Ser	Tyr
Gly	His	Thr	Pro	Ser	His	His	Ala	Ala	Gln	Phe	Pro	Asn	His	Ser	Phe
Lys	His	Glu	Asp	Pro	Met	Gly	Gln	Gln	Gly	Ser	Leu	Gly	Glu	Gln	Gln
Tyr	Ser	Val	Pro	Pro	Pro	Val	Tyr	Gly	Cys	His	Thr	Pro	Thr	Asp	Ser
Cys	Thr	Gly	Ser	Gln	Ala	Leu	Leu	Leu	Arg	Thr	Pro	Tyr	Ser	Ser	Asp
Asn	Leu	Tyr	Gln	Met	Thr	Ser	Gln	Leu	Glu	Cys	Met	Thr	Trp	Asn	Gln
Met	Asn	Leu	Gly	Ala	Thr	Leu	Lys	Gly	Val	Ala	Ala	Gly	Ser	Ser	Ser
Ser	Val	Lys	Trp	Thr	Glu	Gly	Gln	Ser	Asn	His	Ser	Thr	Gly	Tyr	Glu
Ser	Asp	Asn	His	Thr	Thr	Pro	Ile	Leu	Cys	Gly	Ala	Gln	Tyr	Arg	Ile
His	Thr	His	Gly	Val	Phe	Arg	Gly	Ile	Gln	Asp	Val	Arg	Arg	Val	Pro
Gly	Val	Ala	Pro	Thr	Leu	Val	Arg	Ser	Ala	Ser	Glu	Thr	Ser	Glu	Lys
Arg	Pro	Phe	Met	Cys	Ala	Tyr	Pro	Gly	Cys	Asn	Lys	Arg	Tyr	Phe	Lys
Leu	Ser	His	Leu	Gln	Met	His	Ser	Arg	Lys	His	Thr	Gly	Glu	Lys	Pro
Tyr	Gln	Cys	Asp	Phe	Lys	Asp	Cys	Glu	Arg	Arg	Phe	Ser	Arg	Ser	Asp
Gln	Leu	Lys	Arg	His	Gln	Arg	Arg	His	Thr	Gly	Val	Lys	Pro	Phe	Gln
Cys	Lys	Thr	Cys	Gln	Arg	Lys	Phe	Ser	Arg	Ser	Asp	His	Leu	Lys	Thr
His	Thr	Arg	Thr	His	Thr	Gly	Lys	Thr	Ser	Glu	Lys	Pro	Phe	Ser	Cys
Arg	Trp	Pro	Ser	Cys	Gln	Lys	Lys	Phe	Ala	Arg	Ser	Asp	Glu	Leu	Val
Arg	His	His	Asn	Met	His	Gln	Arg	Asn	Met	Thr	Lys	Leu	Gln	Leu	Ala

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<210> 405
<211> 428
<212> PRT
<213> Homo sapiens
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<400> 405																
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Ser	Pro	Gly	Gly	Gly	Gly	Gly	Cys	Ala	Leu	Pro	Val	Ser	Gly	Ala	Thr	
			20					25					30			
Gln	Trp	Ala	Pro	Val	Leu	Asp	Phe	Val	Pro	Pro	Gly	Ala	Pro	Val	Cys	
		35					40					45				
Gly	Ser	Leu	Gly	Gly	Pro	Ala	Pro	Pro	Pro	Ala	Pro	Pro	Pro	Leu	Pro	
	50					55					60					
Pro	Pro	Pro	Ser	His	Ser	Phe	Thr	Lys	Gln	Glu	Pro	Ser	Trp	Gly	Gly	
65					70					75					80	
Thr	Glu	Pro	His	Ala	Gly	Gln	Gly	Arg	Ser	Ala	Leu	Val	Ala	His	Ser	
			85							90				95		
Ser	Gly	Gln	Phe	Thr	Gly	Thr	Ala	Gly	Ala	Cys	Arg	Tyr	Gly	Pro	Phe	
			100					105					110			
Gly	Pro	Pro	Pro	Pro	Ser	Gln	Ala	Ser	Ser	Gly	Gln	Ala	Arg	Met	Phe	
			115				120					125				
Pro	Asn	Ala	Pro	Tyr	Leu	Pro	Ser	Cys	Leu	Glu	Ser	Gln	Pro	Ala	Ile	
	130					135					140					
Arg	Asn	Gln	Gly	Tyr	Ser	Thr	Val	Thr	Phe	Asp	Gly	Thr	Pro	Ser	Tyr	
145					150					155					160	
Gly	His	Thr	Pro	Ser	His	His	Ala	Ala	Gln	Phe	Pro	Asn	His	Ser	Ser	
				165					170					175		
Lys	His	Glu	Asp	Pro	Met	Gly	Gln	Gln	Gly	Ser	Pro	Gly	Glu	Gln	Gln	
			180					185					190			
Tyr	Ser	Ala	Pro	Pro	Pro	Val	Cys	Gly	Cys	Arg	Thr	Pro	Thr	Gly	Ser	
		195					200					205				
Cys	Thr	Gly	Ser	Gln	Ala	Leu	Leu	Leu	Arg	Ala	Pro	Tyr	Ser	Gly	Gly	
	210					215					220					
Asp	Leu	His	Gln	Thr	Thr	Ser	Gln	Leu	Gly	His	Met	Ala	Trp	Asn	Gln	
225					230					235					240	
Thr	Asn	Leu	Gly	Ala	Thr	Leu	Lys	Gly	His	Gly	Thr	Gly	Tyr	Glu	Ser	
			245						250					255		
Asp	Asp	His	Thr	Thr	Pro	Ile	Leu	Cys	Gly	Thr	Gln	Tyr	Arg	Ile	Arg	
		260						265					270			
Ala	Arg	Gly	Val	Leu	Arg	Gly	Thr	Gln	Asp	Val	Arg	Cys	Val	Pro	Gly	
		275					280					285				
Val	Ala	Pro	Thr	Leu	Val	Arg	Ser	Ala	Ser	Glu	Thr	Ser	Glu	Lys	Arg	
	290					295					300					
Pro	Leu	Met	Cys	Ala	Tyr	Pro	Gly	Cys	Asn	Lys	Arg	His	Phe	Lys	Pro	
305					310					315					320	
Ser	Arg	Leu	Arg	Val	Arg	Gly	Arg	Glu	Arg	Thr	Gly	Glu	Lys	Pro	Tyr	
				325					330					335		
Gln	Arg	Asp	Phe	Lys	Asp	Arg	Gly	Arg								

Leu Lys Arg His Gln Arg Gly His Thr Gly Val Lys Pro Leu Gln Cys
 355 360 365
 Glu Ala Arg Arg Arg Pro Pro Arg Pro Gly His Leu Lys Val His Thr
 370 375 380
 Arg Thr His Thr Gly Gly Glu Pro Phe Ser Cys Arg Trp Pro Ser Cys
 385 390 395 400
 Gln Glu Lys Ser Ala Arg Pro Asp Glu Ser Ala Arg Arg His Asn Met
 405 410 415
 His Gln Arg Asn Met Thr Lys Leu Gln Leu Ala Leu
 420 425

<210> 406

<211> 414

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 85, 86, 172, 173, 242, 245, 246, 247

<223> Xaa = Any Amino Acid

<400> 406

Met Gly Ser Asp Val Arg Asp Leu Ser Ala Leu Leu Pro Ala Val Pro
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 Ser Leu Gly Asp Gly Gly Gly Cys Ala Leu Pro Val Ser Gly Ala Ala
 20 25 30
 Gln Trp Ala Pro Val Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala His
 35 40 45
 Gly Pro Leu Gly Gly Pro Ala Pro Pro Ser Ala Pro Pro Pro Pro
 50 55 60
 Pro Pro Pro Pro His Ser Phe Ile Lys Gln Gly Pro Ser Trp Gly Gly
 65 70 75 80
 Ala Glu Leu His Xaa Gln Tyr Leu Ser Ala Phe Thr Val His Ser
 85 90 95
 Ser Gly Gln Val His Trp His Gly Arg Gly Leu Ser Leu Arg Ala Pro
 100 105 110
 Arg Pro Pro Ser Ala Gln Pro Gly Val Ile Arg Pro Gly Gln Asp Val
 115 120 125
 Ser Arg Ala Leu Pro Ala Gln Pro Pro Arg Glu Pro Ala Arg Tyr Pro
 130 135 140
 Gln Ser Gly Leu Gln His Gly His Leu Arg Arg Gly Val Arg Leu Arg
 145 150 155 160
 Ser His Ala Leu Ala Pro Cys Gly Ala Val Leu Xaa Xaa Thr Arg Ala
 165 170 175
 Gly Ser His Gly Pro Ala Gly Ser Ala Gly Ala Ala Val Leu Gly Ala
 180 185 190
 Ala Pro Gly Leu Trp Pro Pro His Pro Arg Arg Gln Leu Arg Arg Gln
 195 200 205
 Pro Gly Phe Ala Ala Glu Gly Ala Leu Gln Arg Arg Phe Ile Pro Ser
 210 215 220
 Asp Val Pro Ala Val His Gly Leu Glu Ser Asp Glu Pro Arg Gly Arg
 225 230 235 240
 Leu Xaa Gly Pro Xaa Xaa Xaa Val Arg Glu Arg Ser His Asn Ala Arg

U00000:1938260

245 250 255
 Pro Leu Arg Ser Pro Ile Gln Asn Thr His Ala Arg Cys Leu Gln Gly
 260 265 270
 Arg Ser Gly Cys Ala Pro Cys Ala Trp Ser Ser Pro Asp Ser Cys Thr
 275 280 285
 Val Gly Ile Gly Gln Gly Thr Pro Pro His Val Cys Leu Pro Arg Leu
 290 295 300
 Gln Glu Val Ser Glu Ala Ala Pro Leu Thr Asp Ala Arg Glu Ala Arg
 305 310 315 320
 Trp Glu Thr Ile Pro Val Leu Gln Gly Leu Trp Thr Glu Val Phe Leu
 325 330 335
 Leu Arg Pro Ala Gln Lys Thr Pro Gly Glu Ala Tyr Arg Cys Glu Ala
 340 345 350
 Ile Pro Ala Asp Leu Ser Ala Arg Val Leu Pro Ala Gln Pro Pro Glu
 355 360 365
 Asp Pro Arg Gln Asp Ser Cys Arg Lys Ala Pro Gln Leu Ser Val Val
 370 375 380
 Arg Leu Ser Glu Lys Ala Cys Pro Val Lys Val Gly Pro Pro Ser Arg
 385 390 395 400
 His Ala Ser Glu Gly His Asp Arg Thr Pro Ala Gly Ala Leu
 405 410

<210> 407

<211> 417

<212> PRT

<213> Homo sapiens

<400> 407

Met Gly Ser Asp Val Arg Asp Leu Ser Ala Leu Leu Pro Thr Ala Pro
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 Ser Leu Gly Gly Gly Gly Asp Cys Thr Leu Pro Val Ser Gly Thr Ala
 20 25 30
 Gln Trp Ala Pro Val Pro Ala Ser Ala Pro Pro Gly Ala Ser Ala Tyr
 35 40 45
 Asp Ser Leu Gly Gly Pro Ala Pro Pro Pro Ala Pro Pro Pro Pro
 50 55 60
 Pro Pro Pro Pro His Ser Cys Gly Glu Gln Gly Pro Ser Trp Gly Gly
 65 70 75 80
 Ala Glu Pro Arg Glu Gly Gln Cys Leu Ser Ala Pro Ala Val Arg Phe
 85 90 95
 Ser Gly Arg Phe Thr Gly Thr Val Gly Ala Cys Arg Tyr Gly Pro Leu
 100 105 110
 Gly Pro Pro Pro Pro Ser Gln Ala Pro Ser Gly Gln Thr Arg Met Leu
 115 120 125
 Pro Ser Ala Pro Tyr Leu Ser Ser Cys Leu Arg Ser Arg Ser Ala Ile
 130 135 140
 Arg Ser Gln Gly Arg Ser Thr Ala Pro Ser Ala Gly Arg Pro Ala Met
 145 150 155 160
 Ala Pro Thr Leu Ala Pro Pro Ala Gln Ser His Tyr Ser Gln His Gly
 165 170 175
 Val Leu His Gly Pro Ala Gly Leu Ala Gly Ala Ala Val Leu Gly Ala
 180 185 190
 Ala Pro Gly Leu Trp Leu Pro His Pro His Arg Gln Leu His Arg Gln

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<210> 408
<211> 429
<212> PRT
<213> Homo sapiens
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<400>	408																
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Ser	Leu	Gly	Gly	Gly	Gly	Gly	Cys	Ala	Leu	Pro	Val	Ser	Gly	Ala	Ala		
			20					25					30				
Gln	Trp	Ala	Pro	Val	Leu	Asp	Phe	Ala	Pro	Pro	Gly	Ala	Ser	Ala	Tyr		
		35					40					45					
Gly	Ser	Leu	Gly	Gly	Pro	Ala	Pro	Pro	Pro	Ala	Pro	Pro	Pro	Pro	Pro		
	50					55					60						
Pro	Pro	Pro	Pro	His	Ser	Phe	Ile	Lys	Gln	Glu	Pro	Ser	Trp	Gly	Gly		
65				70						75					80		
Ala	Glu	Pro	His	Glu	Gln	Cys	Leu	Ser	Ala	Phe	Thr	Val	His	Phe			
			85						90				95				
Ser	Gly	Gln	Phe	Thr	Gly	Thr	Ala	Gly	Ala	Cys	Arg	Tyr	Gly	Pro	Phe		
			100					105					110				
Gly	Pro	Pro	Pro	Pro	Ser	Gln	Ala	Ser	Ser	Gly	Gln	Ala	Arg	Met	Phe		
		115					120					125					
Pro	Asn	Ala	Pro	Tyr	Leu	Pro	Ser	Cys	Leu	Glu	Ser	Gln	Pro	Ala	Ile		

Arg	Asn	Gln	Gly	Tyr	Ser	Thr	Val	Thr	Phe	Asp	Gly	Thr	Pro	Ser	Tyr
145					150					155					160
Gly	His	Thr	Pro	Ser	His	His	Ala	Ala	Gln	Phe	Pro	Asn	His	Ser	Phe
				165					170						175
Lys	His	Glu	Asp	Pro	Met	Gly	Gln	Gln	Gly	Ser	Leu	Gly	Glu	Gln	Gln
			180					185					190		
Tyr	Ser	Val	Pro	Pro	Pro	Val	Tyr	Gly	Cys	His	Thr	Pro	Thr	Asp	Ser
		195					200					205			
Cys	Thr	Gly	Ser	Gln	Ala	Leu	Leu	Leu	Arg	Thr	Pro	Tyr	Ser	Ser	Asp
	210					215					220				
Asn	Leu	Tyr	Gln	Met	Thr	Ser	Gln	Leu	Glu	Cys	Met	Thr	Trp	Asn	Gln
225					230					235					240
Met	Asn	Leu	Gly	Ala	Thr	Leu	Lys	Gly	His	Ser	Thr	Gly	Tyr	Glu	Ser
				245					250					255	
Asp	Asn	His	Thr	Thr	Pro	Ile	Leu	Cys	Gly	Ala	Gln	Tyr	Arg	Ile	His
			260					265					270		
Thr	His	Gly	Val	Phe	Arg	Gly	Ile	Gln	Asp	Val	Arg	Arg	Val	Pro	Gly
		275					280					285			
Val	Ala	Pro	Thr	Leu	Val	Arg	Ser	Ala	Ser	Glu	Thr	Ser	Glu	Lys	Arg
	290					295					300				
Pro	Phe	Met	Cys	Ala	Tyr	Pro	Gly	Cys	Asn	Lys	Arg	Tyr	Phe	Lys	Leu
305					310				315						320
Ser	His	Leu	Gln	Met	His	Ser	Arg	Lys	His	Thr	Gly	Glu	Lys	Pro	Tyr
				325					330					335	
Gln	Cys	Asp	Phe	Lys	Asp	Cys	Glu	Arg	Arg	Phe	Phe	Arg	Ser	Asp	Gln
			340					345					350		
Leu	Lys	Arg	His	Gln	Arg	Arg	His	Thr	Gly	Val	Lys	Pro	Phe	Gln	Cys
		355					360					365			
Lys	Thr	Cys	Gln	Arg	Lys	Phe	Ser	Arg	Ser	Asp	His	Leu	Lys	Thr	His
	370					375					380				
Thr	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Phe	Ser	Cys	Arg	Trp	Pro	Ser
385					390					395					400
Cys	Gln	Lys	Lys	Phe	Ala	Arg	Ser	Asp	Glu	Leu	Val	Arg	His	His	Asn
				405					410					415	
Met	His	Gln	Arg	Asn	Met	Thr	Lys	Leu	Gln	Leu	Ala	Leu			
			420					425							

<400> 409

[illegible]

65					70					75					80
Gly	Gly	Pro	Ala	Pro	Pro	Pro	Ala	Pro	Pro	Pro	Pro	Pro	Pro	His	
			85						90				95		
Ser	Phe	Ile	Lys	Gln	Glu	Pro	Ser	Trp	Gly	Gly	Ala	Glu	Pro	Glu	
			100					105					110		
Glu	Gln	Cys	Leu	Ser	Ala	Phe	Thr	Val	His	Phe	Ser	Gly	Gln	Thr	
		115					120					125			
Gly	Thr	Ala	Gly	Ala	Cys	Arg	Tyr	Gly	Pro	Phe	Gly	Pro	Pro	Pro	
		130					135				140				
Ser	Gln	Ala	Ser	Ser	Gly	Gln	Ala	Arg	Met	Phe	Pro	Asn	Ala	Tyr	
145					150					155				160	
Leu	Pro	Ser	Cys	Leu	Glu	Ser	Gln	Pro	Ala	Ile	Arg	Asn	Gln	Tyr	
				165					170					175	
Ser	Thr	Val	Thr	Phe	Asp	Gly	Thr	Pro	Ser	Tyr	Gly	His	Thr	Ser	
			180					185					190		
His	His	Ala	Ala	Gln	Phe	Pro	Asn	His	Ser	Phe	Lys	His	Glu	Pro	
		195					200					205			
Met	Gly	Gln	Gln	Gly	Ser	Leu	Gly	Glu	Gln	Gln	Tyr	Ser	Val	Pro	
		210					215					220		Pro	
Pro	Val	Tyr	Gly	Cys	His	Thr	Pro	Thr	Asp	Ser	Cys	Thr	Gly	Ser	
225					230					235				Gln	
Ala	Leu	Leu	Leu	Arg	Thr	Pro	Tyr	Ser	Ser	Asp	Asn	Leu	Tyr	Gln	
				245					250					255	
Thr	Ser	Gln	Leu	Glu	Cys	Met	Thr	Trp	Asn	Gln	Met	Asn	Leu	Gly	
			260					265					270	Ala	
Thr	Leu	Lys	Gly	His	Ser	Thr	Gly	Tyr	Glu	Ser	Asp	Asn	His	Thr	
		275					280					285		Thr	
Pro	Ile	Leu	Cys	Gly	Ala	Gln	Tyr	Arg	Ile	His	Thr	His	Gly	Val	
		290					295					300		Phe	
Arg	Gly	Ile	Gln	Asp	Val	Arg	Arg	Val	Pro	Gly	Val	Ala	Pro	Thr	
305					310					315				Leu	
Val	Arg	Ser	Ala	Ser	Glu	Thr	Ser	Glu	Lys	Arg	Pro	Phe	Met	Cys	
				325					330					335	
Tyr	Pro	Gly	Cys	Asn	Lys	Arg	Tyr	Phe	Lys	Leu	Ser	His	Leu	Gln	
			340					345					350	Met	
His	Ser	Arg	Lys	His	Thr	Gly	Glu	Lys	Pro	Tyr	Gln	Cys	Asp	Phe	
		355					360					365		Lys	
Asp	Cys	Glu	Arg	Arg	Phe	Phe	Arg	Ser	Asp	Gln	Leu	Lys	Arg	Gln	
		370				375					380				
Arg	Arg	His	Thr	Gly	Val	Lys	Pro	Phe	Gln	Cys	Lys	Thr	Cys	Gln	
385					390					395				Arg	
Lys	Phe	Ser	Arg	Ser	Asp	His	Leu	Lys	Thr	His	Thr	Arg	Thr	His	
				405					410					415	
Gly	Glu	Lys	Pro	Phe	Ser	Cys	Arg	Trp	Pro	Ser	Cys	Gln	Lys	Phe	
			420					425					430		
Ala	Arg	Ser	Asp	Glu	Leu	Val	Arg	His	His	Asn	Met	His	Gln	Arg	
			435				440					445		Asn	
Met	Thr	Lys	Leu	Gln	Leu	Ala	Leu								

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<210> 410
<211> 504
<212> PRT
<213> Homo sapiens
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[illegible][illegible]

[illegible]

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<400> 411
Val Leu Asp Phe Ala Pro Pro Gly Ala Ser
  1             5             10
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<400> 412
Gln Trp Ala Pro Val Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala
1 5 10 15

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<400> 413
Val Leu Asp Phe Ala Pro Pro Gly Ala Ser Ala Tyr Gly Ser Leu
  1                      5                      10                     15
```